

Response to Docket RSPA-2004-18730 – Request for comments on  
Enhancing Rail Transportation Security for Toxic Inhalation Hazard Materials

A. Security Plans

1. Lyondell Chemical Company utilized the methodology developed by the American Chemistry Council to prepare its Transportation Security Plan.
2. This methodology may be applied generally to all shipments of TIH materials. Both shippers and carriers may use this methodology.
3. The “layered” approach for security has been utilized in this plan. Methods for layering in-transit security are limited and tend to escalate to a high level of security at moderate threat levels. Definitive guidance from Federal agencies could be limiting as new or improved technologies become available.
4. It is not appropriate to discuss the types of security measures used or the methods used to assess their effectiveness in a public forum.
5. While it may be useful for DOT or DHS to provide guidelines or standards for security measures that would normally be expected for TIH operations environment, I am not sure that either agency has sufficient knowledge to develop security measures that are not already being utilized by industry.
6. Transportation security plans developed by Lyondell contain security measures that cover all modes of transport. It would not be feasible or practical to segregate those security measures that apply to rail transport of TIH materials. Additionally, in-transit security of TIH materials in tank cars is the responsibility of the rail road that has care and custody of the tank car. It is the shipping communities understanding that both FRA and DHS have been given the opportunity to review these plans. Some facility plans have already been reviewed by the US Coast Guard as required by the Maritime Transportation Security Act and the International Ship and Port Facility Code. Having these plans reviewed by DOT and/or DHS would serve no purpose.

B. Identification of Materials and Hazard Communication

1. The removal of identifying marks from rail tank cars may be in conflict with the requirements of 29 CFR 1910 Subpart Z – Hazard Communications.
2. There are currently no cost effective and easy-to-use systems for use by transport workers for handling rail tank cars. Placards and car markings are used when handling cars on plant sites. If markings and placards are removed from tank cars, the risk of loading the wrong material into a tank car will be increased. Additionally, there will be thousands of volunteer fire departments that will need additional training and equipment to determine the appropriate response to any incident that involves tank cars.
3. Any system that will replace the current placarding system must be easy to operate, work in all weather conditions (e.g., rain, snow, sleet, high temperatures, low temperatures, etc.) and be readily available at a low cost to every regular and volunteer fire department in the US. With such accessibility, it is easy to envision that any terrorist could also obtain the equipment to identify the contents of a tank car. It would be very difficult to prevent the malicious use of such systems.

4. Every emergency responder (fire, law enforcement, and private sector) would be affected by changing system that used to identify the contents of a tank car that is used to transport TIH material. Training costs could be doubled since training programs would need to cover the two methods for identifying tank cars; the existing placarding systems for all products other than TIH materials and the yet-to-be developed system for identifying TIH materials. Who would pay for any new equipment needed to utilize a new system? Most communities with volunteer fire departments do not have the funds to purchase such equipment.
5. Persons performing the loading and unloading functions do not normally see the shipping papers. The markings and placards for tank cars that transport TIH materials often times are the primary source of identification of these materials. It may become necessary to apply markings that comply with the requirements of 29 CFR 1910 Subpart Z to TIH containing tank cars when located on plant sites. It is not clear if these markings will then need to be removed to comply with any new DOT/DHS regulation. Currently Lyondell applies tags to all valves on tank cars that convey hazard communication information. Would this practice need to be stopped?
6. This question is most appropriately answered by emergency responders.
7. Shippers and carriers of tank cars that move between the US and Canada and Mexico would need to develop a method for applying markings and placards at the borders with Canada and Mexico for outbound shipments and the removal of markings and placards for inbound shipments of TIH materials. This would increase the potential exposure of these tank cars while trains were stopped to perform these operations. It is not clear if this new rule would also apply to UN portable tanks carrying TIH materials that are transported by rail to port areas. If placards and markings were not permitted on these UN portable tanks, then delays would occur at ports for both inbound and out bound tanks. Inter modal yards could become clogged with portable tanks awaiting the application and removal of markings and placards.

### C. Temporary Storage of TIH Materials in Rail Tank Cars

1. There is some concern about security during storage-in-transit (SIT) while a tank car is in the care and custody of the railroad. Although it is hard to judge the adequacy of security during SIT, Lyondell believes that during times of Orange or Red Threat Levels, the railroads do provide additional “layers” of security for TIH and other hazardous materials of concern. It does not seem practical to fence marshalling yards or other tracks. Additional security personnel, more frequent patrols and limiting the time that tank cars are SIT seem to be appropriate measures.
2. Individual cities have limits on the number and type of tank cars that may be stored in some locations. In the mid-1970s, the Fire Marshal for New Orleans, LA prohibited the storage of tank cars containing Chlorine on tracks that bordered the French Quarter. This restriction was base on a risk analysis of the simultaneous failure of multiple cars with atmospheric conditions that would cause the released chlorine to drift into the French Quarter during Mardi Gras. However, it is more appropriate for the rail roads to answer this question since they are more familiar with the physical layout and location of SIT facilities, but any such decisions should be base on a risk analysis.

3. Transportation patterns have changed during the last decade. The storing of inventory in tank cars for long periods is no longer considered to be a good business practice. It is not common practice for Lyondell to store TIH materials for more than short times. The TIH materials manufactured by Lyondell are somewhat time sensitive and if they are stored for even short time periods they may not meet production and/or customer specifications. At least for Lyondell, storage of TIH materials, except for SIT type storage, is not an issue.
4. In-plant or adjacent storage of tank cars is already covered by facility transportation security plans. Other SIT security measures would be more appropriately addressed by the railroads. However, frequent and random patrols, training in identifying and reporting unusual activities and challenging unauthorized persons are some measures that can be employed to increase security at SIT sites.
5. Lyondell has already taken measures to limit the storage of tank cars of TIH materials at or adjacent to plants during current threat levels. This may not be possible during the highest threat level since one strategy currently being used is to deliver all high hazard materials to destination. This could require plants to accept more tank cars containing TIH materials than normal. Also, it may be necessary to retain large number tank cars containing TIH materials at producing plants in order to safely shut-down production operation. Limiting storage time and amounts must be addressed with careful thought.
6. Many plants have limited on-site track or adjacent track. These facilities have no space to install additional tracks. Expedited delivery to these plants would not be possible. Some Lyondell customers fall into this category.

#### D. Tank Car Integrity

Questions in this section should generally be answered by tank car manufacturers. However, as is pointed out in the Notice, TIH materials are typically transported in tank cars that are over designed in relation to the physical properties of the material. As an example, Ethylene Oxide, a Zone D TIH, is transported in a 105J300W tank car. This tank car is designed using 11/16 inch thick steel (unless high tensile strength steels are used). At one time, this material was transported in 111A100W tank cars using 7/16 inch steel. Additional measures are already in place to provide additional accident protection. Full head shields were added to tank cars to reduce punctures during derailments. These head shields also provide added protection from terrorist attack. I do not believe that it is possible to protect tank cars from rockets, rocket propelled grenades, explosives, or high powered rifle attacks.

Industry typically uses any number of devices to provide an indication of tampering with rail cars, including tank cars containing TIH materials. High tensile braided steel cables, locking bolts, and rings to block the dome access ports are but a few examples. Use of locks is problematic. How should keys be sent to customers? How can combinations be safely transmitted to customers? Will the tank cars be locked upon return? High tensile braided steel cables will deter most people. However, locks and cables will not stop a determined terrorist.

## E. Communication and Tracking

While I cannot comment on all of the specific questions in this section, I will offer the following general observations. Lyondell tracks all rail cars, not just tank cars transporting TIH materials. Today's operations require "just-in-time" delivery of materials. When relying on the rail roads to deliver materials, customers provide extra lead time. This is necessary because the rail roads do not run on a schedule. During the summer of 2004, rail delivery times increase between 5 and 7 days due the rail road's inability to react quickly enough to the up turn in the economy. This situation expected to continue for another 6 to 18 months. It would be difficult for a Federal agency to determine an appropriate time period for delivery (or delay in delivery) of TIH materials.

Additionally, tank cars are limited to travel on tracks as opposed to tank trucks that have the freedom of the open road. It is my belief that it would be very difficult if not impossible to route tanks cars over moderate distances and deliver them to a specific location at a specific time. I believe that the railroad's undependable time schedule is actually a deterrent to use of tank cars as a weapon of mass destruction or a weapon of opportunity.

Having "cab control" and monitoring capability seems to be a more effect approach. Additional GPS tracking capability on tank cars will provide only marginal additional value.